



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,502	02/02/2005	Eduard Michel	2002DE124	1365

25255 7590 08/06/2007

CLARIANT CORPORATION  
INTELLECTUAL PROPERTY DEPARTMENT  
4000 MONROE ROAD  
CHARLOTTE, NC 28205

EXAMINER
----------

BURNEY, RACHEL L

ART UNIT	PAPER NUMBER
----------	--------------

1753

MAIL DATE	DELIVERY MODE
-----------	---------------

08/06/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/523,502	<b>Applicant(s)</b> MICHEL ET AL.	
	<b>Examiner</b> Rachel L. Burney	<b>Art Unit</b> 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 1 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____  |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :06/02/2005, 10/28/2005, 02/26/2007.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statements (IDS) submitted on 06/02/2005, 10/28/2005, and 02/26/2007 were filed after the mailing date of the application on 02/02/2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.
2. The reference 54101809 is not a US Patent, and has therefore been crossed off and is not being considered.
3. US Patent 6350049 is not considered relevant as it is drawn to a lighting arrangement for motor vehicles. US Patent 5410809 is not considered relevant as it is drawn to a method of making a bearing cage with depressed slot end. US Patent 5051676 is not considered relevant as it is drawn to a robot program checking method.

### ***Specification***

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is

Art Unit: 1753

requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

5. Claims 1 and 8 are objected to because of the following informalities: improper punctuation. Appropriate correction is required.

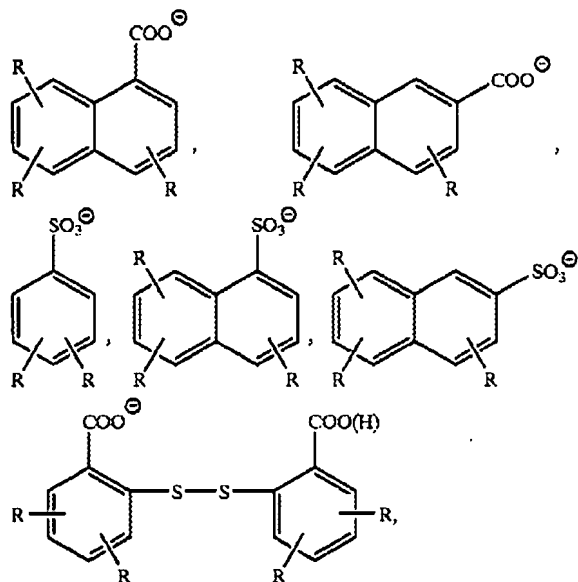
### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear if the formulas:

Art Unit: 1753



are additional organic anions or more substituents for  $\text{R}^{18}$ ,  $\text{R}^{19}$ , and  $\text{R}^{20}$ . The claim has been interpreted to include the above formulas as additional organic anions.

### ***Claim Rejections - 35 USC § 102***

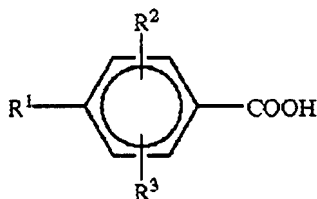
8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-3, 5, and 8-14 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 6207335, Michel et al.

With respect to claims 1, 3, and 14, Michel discloses a process for controlling the charge of an electrophotographic toner by adding a control agent to the toner wherein the charge control agent comprises an alkali metal salt which comprises the acid of the formula:



wherein R<sup>1</sup> is a linear or branched alkyl radical with 1 to 18 carbon atoms, R<sup>2</sup> and R<sup>3</sup> are C1-C8-alkyl or C1-C4-alkoxy (column 4, line 47 – column 6, line 8).

Michel discloses that it is possible to employ the metal cations directly in the form of their hydroxides (hydroxide salts) (column 8, lines 52-54). Michel further discloses that the salts can comprise divalent and trivalent metal cations (column 7, lines 37-38). The formula for the salts of Michel are substantially similar to those of the instant application, and therefore the compositions would have substantially similar characteristics, such as being a double hydroxide salt having about 1.8 to about 2.2 times as many hydroxyl groups as metal cations.

With respect to claim 2, Michel discloses the process of claim 1 as discussed above, wherein the organic anions is 4-tert-butylbenzoic acid (column 15, line 46).

With respect to claim 8, Michel discloses the process of claim 1 as discussed above, wherein the addition step further comprises adding a further charge control agent selected from the group consisting of triphenylmethanes, ammonium and immonium compounds, fluorinated ammonium compounds, fluorinated

Art Unit: 1753

immonium compounds, biscationic acid amines, polymeric ammonium compounds, diallylammonium compounds, aryl sulfide derivatives, phenol derivatives, phosphonium compounds, fluorinated phosphonium compounds, calyx(n)arenes, cyclically linked oligosaccharides, derivatives of cyclically linked oligosaccharides, boric ester derivatives, interpolyelectrolyte complexes, polyester salts, benzimidazolones, azines, thiazines, and oxazines (column 14, lines 41-51).

With respect to claims 9 and 10, Michel discloses the process of claim 1 as discussed above, wherein the electrophotographic toner contains 0.01 to 50% by weight of a binder (column 15, lines 12-15), 0.01-50% by weight of the charge control agent, hydroxide salt as shown in claim 1, (column 14, lines 35-40), and 1-10% by weight of a colorant (column 15, lines 22-24).

With respect to claim 11, Michel discloses the process of claim 1 as discussed above, wherein the divalent metal cations are selected from the group consisting of  $Mg^{2+}$ ,  $Ca^{2+}$ ,  $Zn^{2+}$ ,  $Co^{2+}$ ,  $Cu^{2+}$ , and  $Mn^{2+}$  (column 8, lines 41-42).

With respect to claim 12, Michel discloses the process of claim 1 as discussed above, wherein the trivalent metal cations are selected from the group consisting of  $Al^{3+}$ ,  $Fe^{3+}$ ,  $Co^{3+}$ , and  $Mn^{3+}$  (column 8, lines 43-44).

With respect to claim 13, Michel discloses the process of claim 8 as discussed above, wherein the metal carboxylate (complex) comprises salicylate (column 13, lines 17-28).



***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6207335, Michel et al. as applied to claim 1 above, and further in view of US Patent 5445911, Russell et al. Michel discloses the process of claim 1 as discussed above, but fails to teach the use of a monovalent metal cation. Russell discloses the use of metal cations in a positive charge director in an electrographic toner wherein the preferred metals are K<sup>+</sup> and Na<sup>+</sup> because they have no health or environmental issues

Art Unit: 1753

(column 3, lines 44-57). It would have been obvious to one of ordinary skill in the art at the time of the invention to use  $K^+$  and  $Na^+$  as metal cations in an electrophotographic toner to reduce the risk of health and environmental issues associated with other metal cations.

13. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6207335, Michel et al. as applied to claim 1 above, and further in view of US Patent 5360859, Ogawa et al. Michel discloses the process of claim 1 as discussed above, wherein the hydroxide salt may contain  $Mg^{2+}$  and  $Al^{3+}$  (column 8, lines 42-43), but does not give a specific example of a hydroxide salt with both cations. Ogawa teaches complex hydroxide salts for stabilizing resins (column 1, lines 60-63) wherein a hydrotalcite having Mg/Al in a ratio from 2-2.5 has the best heat stabilizing action (column 2, lines 15-16). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a hydrotalcite having Mg/Al in a ratio from 2-2.5, as taught by Ogawa, in the process of Michel to optimize the heat stability of the polymer.

14. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6207335, Michel et al. as applied to claim 1 above, and further in view of US PGPub 20030215731, Saiki et al. Michel discloses the process of claim 1 as discussed above, but fails to teach the use of a hydrotalcite. Saiki teaches that commonly used charge control agents include hydrotalcite compounds (PP 0434). It would have been obvious to one of ordinary skill in the art at the time of the invention to use any

Art Unit: 1753

commonly used charge control agents in the process of Michel, including hydrotalcite compounds, as taught by Saiki.

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US PGPub 20050277040, Michel et al. is drawn to the invention of double hydroxide salts used as charge control agents in electrophotographic toners, but is not prior art.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel L. Burney whose telephone number is 571-272-9802. The examiner can normally be reached on Mon-Thurs: 7:30-6:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1753

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*RLB*  
RLB

*Mark E. Huff*  
MARK E. HUFF  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700